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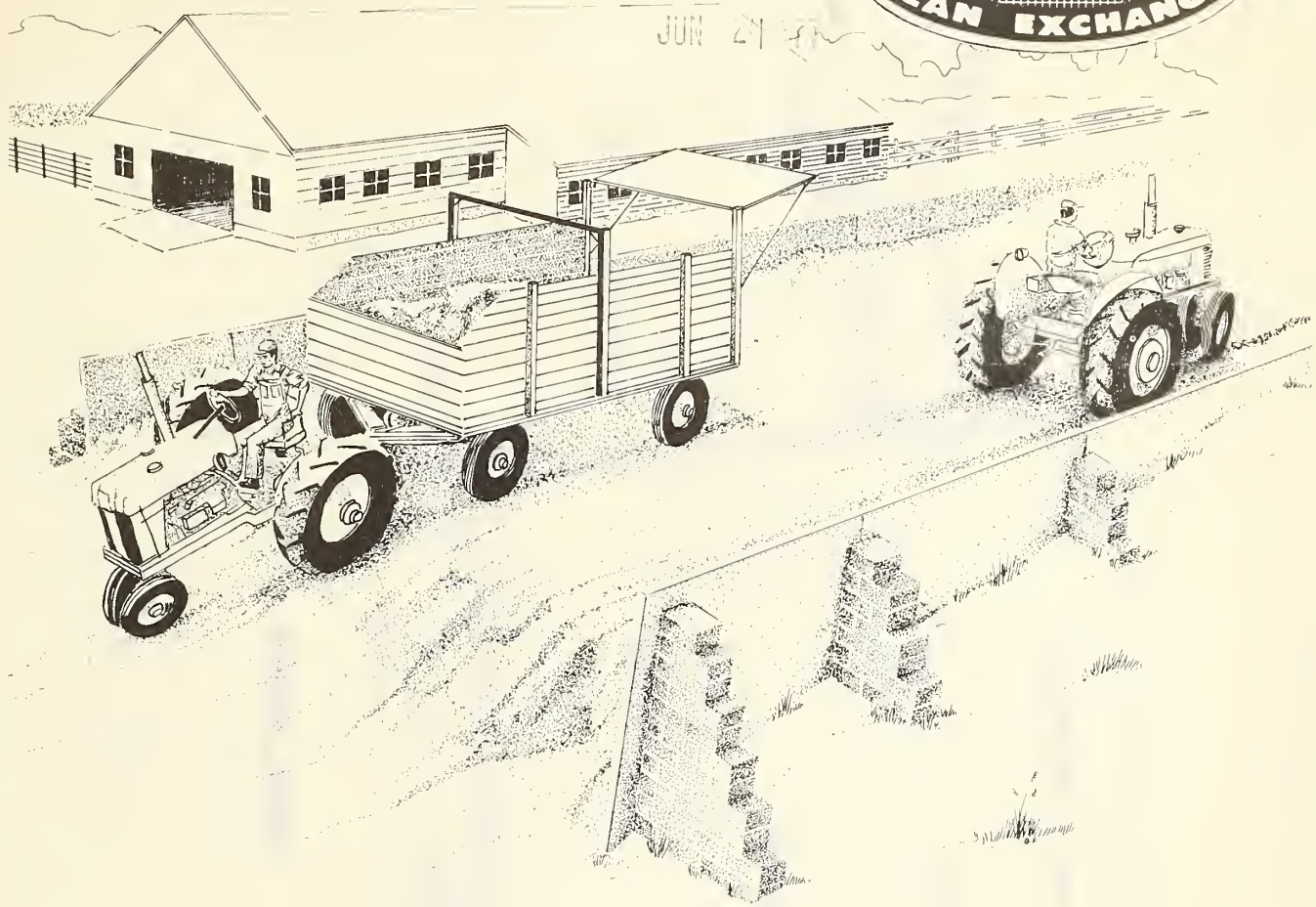
HORIZONTAL SILO

Tilt - up Below Grade

COOPERATIVE FARM BUILDING
Plan No. 6175
(1 SHEET)
PLAN EXCHANGE

JUN 21



Horizontal silos provide inexpensive storage and are well suited to the use of mobile power equipment for loading and unloading. As cattle herds grow larger, the demand for large economical silage storage increases.

This concrete block and reinforced concrete silo, designed by the University of Cornell, Ithaca, N.Y., features the use of tilt-up construction below grade. The 12- by 24-inch wide concrete footing, for the concrete blocks and concrete floor slab, is first cast in place. When the concrete has cured, the forms are removed. Many rural builders are experienced in using the tilt-up construction methods.

When excavating for your silo, provide a 2-percent floor slope toward the open end for drainage. Specify minimum of 4,000 pounds per square inch compressive strength concrete, that is (6 gallons of water per sack of cement, minimum 7 sacks of cement per cubic yard of concrete. Use 6 percent air entrainment. A minimum lap for all reinforcing shall be 10 inches. Polyethylene or paraffin-coated paper bond breaker should be used between floor and panels, but use a vibrator to eliminate voids in the concrete. Wet cure the panels 5 to 7 days before tilting into place.

Complete working drawings may be obtained from the extension agricultural engineer at your State university. There may be a small charge to cover cost of printing.

If you do not know the location of your State university, send your request to Agricultural Engineer, Extension Service, U.S. Department of Agricultural, Washington, D.C. 20250. He will forward your request to the correct university. ORDER PLAN NO. 6175, HORIZONTAL SILO, Tilt-up Below Grade.

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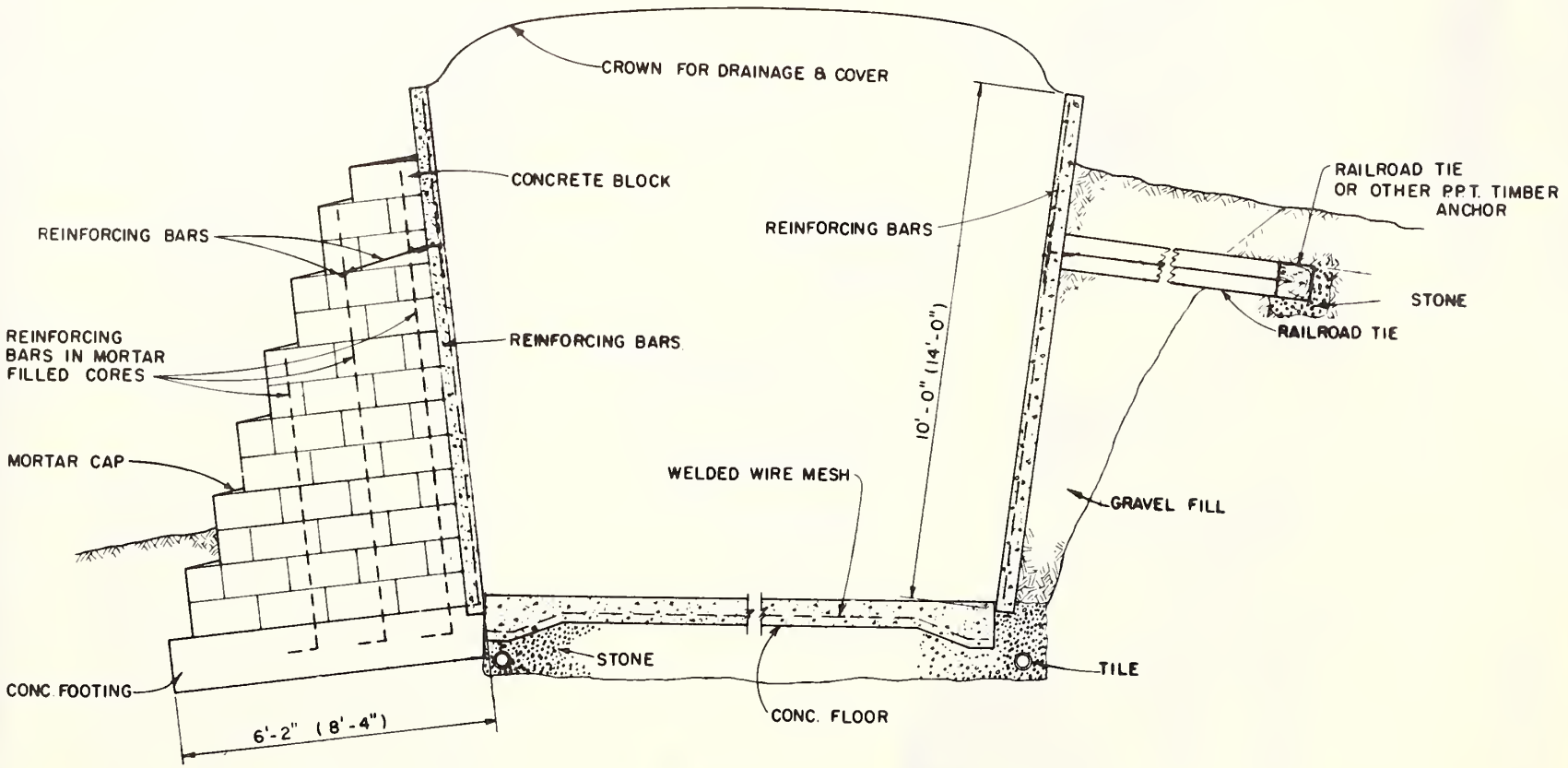

CROSS SECTION